Abstract of the Disclosure

Resistances of signal paths within a interconnect structure for linking input/output (I/O) ports of an integrated circuit (IC) tester to test points of an IC are measured by the IC tester itself. To do so the interconnect structure is used to link the tester's I/O ports to a similar arrangement of test points linked to one another through conductors. Drivers within the tester, which normally transmit digital test signals to IC test points via the I/O ports when the IC is under test, are modified so that they may also either transmit a constant current through the I/O ports or link the I/O ports to ground or other reference potential. The tester then transmits known currents though the signal paths interconnecting the tester's I/O ports. Existing comparators within the tester normally used to monitor the state of an IC's digital output signals are employed to measure voltage drops between the I/O ports, thereby to provide data from which resistance of signal paths within the interconnect structure may be computed.